

FOCUS ON ENVIRONMENT

WINTER 2005

ENVIRONMENTAL RESPONSIBILITY

Environmental stewardship is integral to Sandia National Laboratories responsibility as a corporate citizen. Our environmental responsibilities evolved over more than 50 years. We strive to integrate environmental protection in all activities. We recycle resources and embrace environmental stewardship as integral to exceptional service in the national interest. We are trustees of the splendid flora, fauna, and land on which we work and conduct studies.



The grassland vegetation by Sandia facilities is generally in excellent condition and relatively free of shrubs. This is in part due to the long period of protection from grazing.

COMMUNITY PARTNERSHIPS

At the Department of Energy (DOE)/Sandia Community Resource Information Office, environmental policies and procedures that affect the public are discussed by community representatives, Sandia employees, and federal personnel. Community concerns, values, and priorities are considered. Volunteer task groups prepare recommendations for the DOE and the Environmental Stewardship Project.



Sustainable design is integrated into the construction of new and renovated facilities such as the Microsystems Engineering and Science Applications (MESA) complex.

SUSTAINABLE DESIGN

Sandia National Laboratories buildings are designed using sustainable principles that integrate renewable resources into the life cycle of the facilities. The benefits are a healthful, resource-efficient and productive working environment. For example, the Joint Computational Engineering Laboratory building is positioned to efficiently collect solar energy as well as provide natural light in most parts of the building. To help ensure that sustainable design principles are integrated in all construction efforts, Sandia developed a Sustainable Design Integrated Education Series.


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This Education Series educates employees, Architecture, Engineering and Construction contractors, and Department of Energy personnel on the benefits and requirements of recycling, purchasing recycled materials and environmentally friendly products, incorporating energy efficiency, water conservation, and related environmental performance into buildings. This increased knowledge translates into environmentally friendly designs. Sandia received a 2002 White House Closing the Circle award, a DOE Pollution Prevention Award in 2003, and currently has six buildings registered with the U.S. Green Building Council for Leadership in Energy and Environmental Design certification.

GREEN ZIA ENVIRONMENTAL EXCELLENCE PROGRAM

Several Sandia organizations participate in the Green Zia Environmental Excellence Program program for businesses and organizations committed to continuous environmental improvement. The program facilitates environmental management from energy use to waste generation. Organizations that participate in the Green Zia program are successful in: reducing waste, increasing recycling, reducing consumption, purchasing fewer chemicals, and improving overall efficiency. Last year, three of our organizations won recognition from the Green Zia Program.

ENVIRONMENTAL EDUCATION

The 7th Annual Youth Conference on the Environment was held in 2004 at the South Broadway Cultural Center. The theme for the conference was "Drip, drip, drop...the tap is running dry." Discussions and interactive sessions include water rights, xeriscaping, sense of place, and a panel with the Mayor and representatives from other agencies. **The 2005 conference will be held April 14, 2005.**

Sandia helped plan, promote, sponsor, and provide presenters for the 9th Annual New Mexico Environmental Health Conference. The Conference is a major regional event and one of the largest environmental health conferences in the country. It attracted about 400 participants in 2004. **The 2005 Conference is planned for October 31 - November 3.**

NEW PROGRESS IN RECYCLING

Sandia National Laboratories is continuously identifying and evaluating potential recycling pathways for materials comprising the solid waste stream. Construction and demolition waste comprises approximately 80% of Sandia's solid waste stream. Recycling options were identified for the four primary construction waste materials: concrete, metal, wood, and wallboard. The first major construction project fully implemented the comprehensive waste recycling program and diverted over 80% (by weight) of all waste materials generated from direct landfill disposal. Results are being incorporated as standard practice into new construction projects. The Construction Waste Recycling Team received a DOE National Nuclear Security Administration Pollution Prevention Award in 2003 for their efforts.

ENVIRONMENTAL RESTORATION (ER) ADVANCES TO STEWARDSHIP

Most scheduled cleanups are complete. Of 262 Project sites scheduled for cleanup, 229 have been proposed for "No Further Action" (NFA), and 173 have been approved for NFA by the New Mexico Environment Department (NMED). Regulatory



Sandia's Long Term Environmental Stewardship activities ramp up as the Environmental Restoration Project completion date of 2006 approaches.

and DOE requirements for performance monitoring, institutional controls and information management are being reviewed. Requirements generated by Kirtland Air Force Base tenants and stakeholders are being coordinated. Most of the ER Project sites restored to a residential risk-level will need no physical controls. Institutional controls will mainly consist of managing the information for future use.

C O R P O R A T E O U T R E A C H

Monitoring requirements for Long-term Environmental Stewardship (LTES) are being developed. Individual sites, such as the Chemical Waste Landfill, Mixed Waste Landfill, and Corrective Action Management Unit will have site-specific post-closure care plans approved by the NMED.

The ER Project has conducted quarterly public meetings since 1993, as well as citizen and LTES meetings. LTES efforts included numerous stakeholder meetings where citizens and regulators participated in a site-prioritization panel and definition



The Environmental Restoration Project is focusing on project closure. Sorting rock and debris from potentially hazardous material is a tedious but a necessary step.

of future land use. Stakeholder task groups created a set of recommendations for LTES management, monitoring, and institutional controls/information management.

PROCUREMENT'S POLLUTION PREVENTION "SUCCESS STORY"

Sandia National Laboratories' Procurement Departments are integrating environmentally preferable purchasing principles into their vendor selection process. Environmentally Preferable Purchasing is the purchase of products, material, and services that have reduced adverse effects on human health and the environment.

Our Rapid Procurement Department added language into four key office product and supply contracts that includes a preference for vendors that can supply environmentally friendly products. Additionally, we annually send for remanufacturing and recycling 10,500 pounds of spent cartridges. New contracts also allowed

Sandia to increase its use of recycled content paper from 81 percent in Fiscal Year (FY) 2001 to 97 percent in FY 2003. For recycled office products, progress continues after a near doubling between 2000 and 2001. Sandia went from purchasing 42 percent in 2000 to 94 percent in 2003 of U.S. Environmental Protection Agency (EPA) selected products.

Architecture/Engineering and Construction contracts include environmentally preferable reporting requirements. In 2003, purchases not meeting EPA's requirements made up less than 1% of the total purchases. The Environmentally Preferable Purchasing Teams received a 2001 White House Closing the Circle award and a DOE National Nuclear Security Administration's Pollution Prevention Award in 2003.

CERAMICS AND GLASS PROCESSING POLLUTION PREVENTION "SUCCESS STORY"

SNL's Ceramics and Glass Organization, has utilized its Lean Manufacturing quality program to reduce waste acetone in a cleaning process. Efficiency improvements included reduced purchases of acetone, labor hours and disposal costs. This effort melds Pollution Prevention concepts with those of "Lean Manufacturing" thereby increasing the integration of pollution prevention into daily business operations.

DOCUMENTS AND LINKS

- **Site Environmental Reports:**
New Mexico: www.prod.sandia.gov/cgi-bin/techlib/access-control.pl/2003/032549.pdf
Tonopah and Kauai: www.prod.sandia.gov/cgi-bin/techlib/access-control.pl/2003/032550.pdf
- **Long Term Environmental Stewardship:**
www.sandia.gov/ltes
- **Green Zia Environmental Excellence:**
www.nmenv.state.nm.us/Green_Zia_website
- **Pollution Prevention Program:**
www-irn.sandia.gov/esh/p2
- **New Mexico Environmental Health Conference:**
www.nmehc.org

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NATIVE AMERICAN RENEWABLE ENERGY TEAM

With a community focus and technical assistance provided to empower tribes, the Native American Renewable Energy Team makes exceptional contributions.

Community focus is listening to the tribes. The team applies its capabilities to assist tribes in understanding various renewable energy options. As Sandia reaches out to tribes, the "people" component is particularly important because Native American culture is different from urban society. With all team members demonstrating cultural



The Sandia team assists rural Native Americans with electrical alternatives.

sensitivity, the members work together to properly assess or define the tribe's needs and effectively communicate renewable energy alternatives to decision makers. While the technical members concentrate on specific issues, Sandia's Tribal Government Relations manager supports the government-to-government interactions.

The team's work with Native Americans has enhanced Sandia's reputation with tribes and rural technology transfer. Sandia Technology, a quarterly research and development journal featured the team in "Making Decisions for Seven Generations, Native Americans bring traditional perspectives to technical solutions."

Visit us at www.sandia.gov/ciim or call (505) 284-5200 for more information.

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